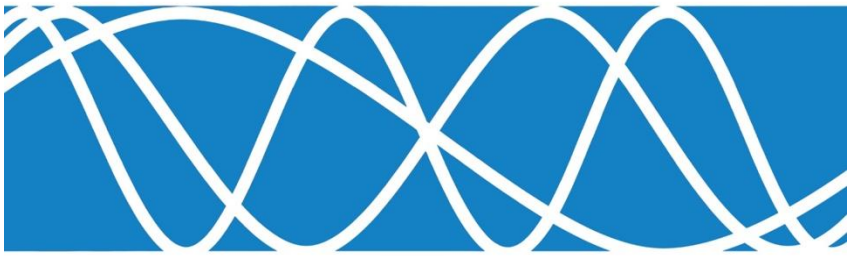
Noise Feasibility Study

Proposed Residential Development, 2105 Headon Rd Burlington, ON

March 17, 2026
HGC Project #: 02500082



Prepared for:

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NOISE | VIBRATION | ACOUSTICS

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Version Control
Noise Feasibility Study Proposed Residential Development, 2105 Headon Road, Burlington, ON

Ver.	Date	Version Description	Prepared By
1.0	June 26, 2025	Noise Feasibility Study in support of the planning and approvals process	I. Kurbanova / S. Paul
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1 INTRODUCTION AND SUMMARY

HGC Noise Vibration Acoustics was retained by JEC Properties Inc. to conduct a noise feasibility study for a proposed townhouse development to be located at 2105 Headon Road in the City of Burlington, Ontario. The proposed development will consist of eight 3-storey townhouses. The surrounding lands are primarily existing residential with a nearby elementary school. The study is required by the municipality as part of their planning and approvals process.

This report has been updated to reflect the latest site plan and the traffic data has been grown to the year 2036.

The primary noise sources impacting the site were determined to be road traffic on Headon Road and Cleaver Avenue. Road traffic data for the roadways were obtained from the City of Burlington and used to predict future traffic sound levels at the locations of the proposed residential dwelling units and in the outdoor living areas. The predicted sound levels were compared to the guidelines of the Ministry of the Environment, Conservation and Parks (MECP) and the municipality.

The results of this study indicate that the proposed development is feasible; Sound level predictions indicate there are no specific ventilation requirements due to transportation noise for the proposed development. Any exterior wall, and double-glazed window construction meeting the minimum requirements of the Ontario Building Code (OBC) will provide adequate sound insulation for all the dwelling units in this development. A noise warning clause is recommended to inform future residents of the proximity to existing institutional uses.

An assessment of the impact of the development on the existing residences was also determined. Results indicate that the sound levels from the proposed air conditioning units are below MECP minimum exclusionary criteria and mitigation is not required.

2 SITE DESCRIPTION AND NOISE SOURCES

Figure 1 is a key plan indicating the location of the proposed site [1]. The site is located northeast of Headon Road, southwest of Cleaver Avenue, and southeast of Jordan Avenue in Burlington, Ontario, specifically at 2105 Headon Road. Figure 2 shows the concept plan prepared by JEC Properties and is dated March 2026, also showing the prediction locations. The proposed development will consist of eight 3-storey townhouse units in one block.

HGC personnel visited the site on June 20, 2025, to make observations of the acoustical environment. During the site visit, it was noted that the primary sources of noise impacting the site were road traffic noise on Headon Road and Cleaver Avenue.

There are existing residential developments around the site. To the immediate northeast of the site is a public school (C.H. Norton Public School). There are no significant sources of stationary noise within 500 m of the subject site.

3 ROAD TRAFFIC NOISE ASSESSMENT

3.1 Road Traffic Noise Criteria

Guidelines for acceptable levels of road traffic noise impacting residential developments are given in the MECP publication NPC-300, "Environmental Noise Guideline Stationary and Transportation Sources – Approval and Planning", release date October 21, 2013 [2], and are listed in Table 1 below. The values in Table 1 are energy equivalent (average) sound levels [L_{EQ}] in units of A weighted decibels [dBA].

Table 1: Road Traffic Noise Criteria

Space	Daytime $L_{EQ(16\ hour)}$ Road	Nighttime $L_{EQ(8\ hour)}$ Road
Outdoor Living Areas	55 dBA	--
Inside Living/Dining Rooms	45 dBA	45 dBA
Inside Bedrooms	45 dBA	40 dBA

Daytime refers to the period between 07:00 and 23:00. Nighttime refers to the time period between 23:00 and 07:00. The term "Outdoor Living Area" (OLA) is used in reference to an outdoor patio, a backyard, a terrace, or other area where passive recreation is expected to occur. Small balconies are not considered OLAs for the purposes of assessment. Terraces greater than 4 m in depth (measured perpendicular to the building façade) are considered to be OLAs.

The guidelines in the MECP publication allow the daytime sound levels in an Outdoor Living Area to be exceeded by up to 5 dBA, without mitigation, if warning clauses are placed in the purchase and rental agreements to the property. Where OLA sound levels exceed 60 dBA, physical mitigation is required to reduce the OLA sound level to below 60 dBA and as close to 55 dBA as technically, economically, and administratively practical.

A central air conditioning system as an alternative means of ventilation to open windows is required for dwellings where nighttime sound levels at the façade exceed 60 dBA or daytime sound levels at the façade exceed 65 dBA. If the sound level in the plane of a bedroom or living/dining room window is greater than 55 dBA and less than or equal to 65 dBA, the dwelling should be designed with a provision for the installation of central air conditioning in the future, at the occupant's discretion.

Building components such as walls, windows and doors must be designed to achieve indoor sound level criteria when the plane of window nighttime sound level is greater than 60 dBA or the daytime sound level is greater than 65 dBA due to road traffic noise.

Warning clauses to notify future residents of possible noise excesses are also required when nighttime sound levels exceed 50 dBA at the façade and when daytime sound levels exceed 55 dBA at the façade due to road traffic.

3.2 Criteria Governing Stationary (Industrial) Noise Sources

MECP Guideline NPC-300 [2] is the MECP guideline for use in investigating Land Use Compatibility issues with regard to noise. Noise from the proposed development may potentially impact neighbouring noise sensitive land uses due to the air conditioning units and the City requires an assessment. The proposed development is located in an urban acoustical environment classifies as Class 1 according to MECP guidelines, which can be characterized by the background sound level being dominated by traffic or human activity.

The façade of a residence (i.e., in the plane of a window), or any associated usable outdoor area, is considered a sensitive point of reception. NPC-300 [2] stipulates that the exclusionary minimum sound level limit for a stationary noise source in an urban Class 1 area is 50 dBA during daytime (07:00 to 19:00) and evening (19:00 to 23:00) hours, and 45 dBA during nighttime hours (23:00 to 07:00). If the background sound levels due to road traffic exceed the exclusionary limits, then the background sound level becomes the criterion. The background sound level is defined as the sound level that occurs when the source under consideration is not operating and may include traffic noise and natural sounds.

The developer's responsibilities are identified in NPC-300 [2], which states that it is the developer's responsibility to ensure that the applicable sound level criteria are met. If noise sources are identified which generate excessive sound levels, source controls are generally favoured by the MECP although NPC-300 [2] further states that outdoor noise control measures at the noise sensitive land use are acceptable.

3.3 Traffic Sound Level Assessment

3.3.1 Road Traffic Data

Traffic data for Headon Road and Cleaver Avenue was obtained from the City of Burlington, in the form of Annual Average Daily Traffic (AADT) for the year 2022, provided in Appendix A. A commercial vehicle percentage of 3.0% was assumed since commercial vehicle percentages were not available, and was

further split into 1.2% medium trucks and 1.8% heavy trucks. A posted speed limit of 40 km/h along with a 90%/10% day/night split was used in the analysis. Traffic volumes were conservatively assumed to grow at a rate of 2.5% per year to the year 2036.

Table 2 summarizes the traffic volume data used in this study.

Table 2: Road Traffic Data Projected to 2036

Roadway	AADT	Day / Night Split [%]	Trucks Percentage (%)		Speed Limit [km/h]
			Medium	Heavy	
Headon Road	6 603	90 / 10	1.2	1.8	40
Cleaver Avenue	4 856	90 / 10	1.2	1.8	40

3.3.2 Road Traffic Noise Predictions

To assess the levels of road traffic noise which will impact the study area in the future, sound level predictions were made using STAMSON version 5.04, a computer algorithm developed by the MECP. Sample STAMSON output is included in Appendix B.

Predictions of the traffic sound levels were chosen around the proposed development site to obtain an appropriate representation of future sound levels at various façades. Sound levels were predicted at the plane of the top storey bedroom and/or living/dining room windows during daytime and nighttime hours to investigate ventilation and façade construction requirements. Sound levels were also predicted in the rear yard outdoor living areas. Figure 2 shows the concept plan with façade prediction locations. The results of these predictions are summarized in Table 3.

Table 3: Future Road Traffic Sound Levels, [dBA], Without Mitigation

Prediction Location	Description	Daytime in OLA $L_{EQ(16\ hour)}$	Daytime at Façade $L_{EQ(16\ hour)}$	Nighttime at Façade $L_{EQ(8\ hour)}$
[A]	Southwest façade facing Headon Road	--	55	48
[B]	Northwest façade flanking Headon Road	54	52	46
[C]	Northeast façade flanking Cleaver Avenue	--	48	41
[D]	Southeast façade facing Cleaver Avenue	50	49	42

3.4 Traffic Noise Recommendations

The predictions indicate that the future traffic sound levels will be within MECP guidelines at all the proposed dwellings.

3.4.1 Outdoor Living Areas

The predicted sound level in the rear yards of all eight units will be within the MECP guidelines. An acoustic barrier is not recommended for the rear yard amenity spaces.

The dwelling units may include private balconies and/or terraces that are less than 4 m in depth. These areas are not considered to be outdoor living areas under the MECP guidelines and therefore are exempt from traffic noise assessment.

3.4.2 Indoor Living Areas

The predicted future sound levels outside the top storey windows of the proposed residential dwellings will be less than 56 dBA during the day and less than 50 dBA during the night. There are no specific ventilation requirements for the proposed townhouse dwellings.

Individual HVAC units are to be used for each townhouse unit. As a general note, the location, installation and sound ratings of the outdoor air conditioning

devices should minimize noise impacts and comply with criteria of MECP publication NPC-300 [2], as applicable.

3.4.3 Building Façade Constructions

Since the daytime and nighttime sound levels at the façades of the residential units will be less than 65 dBA during the day and less than 60 dBA during the night, any exterior wall, and double-glazed window construction meeting the minimum requirements of the Ontario Building Code (OBC) will provide adequate sound insulation for all the dwelling units in this development.

4 STATIONARY SOURCE ASSESSMENT

An analysis was conducted to consider the potential for noise from the residential dwellings, specifically the air conditioning condenser units, at the neighbouring noise sensitive receptors. The calculations included sound emissions from the air conditioning condenser equipment assumed to be located along the rear façades of the building (eight air conditioning units). There are no other stationary sources of noise associated with the residential buildings.

TRANE XR13 Air Conditioners and LUXAIRE LX Series Split-System Air Conditioners are proposed. The condensers have sound levels of 71 to 75 dBA and 74 to 76 dBA respectively. For the purposes of this report a 76 dBA sound level was used for all eight condensers. Relevant manufacturers data for both is provided in Appendix C.

As a general note, the location, installation and sound ratings of the outdoor air conditioning devices should minimize noise impacts and comply with criteria of MECP publication NPC-216 [3] and NPC-300 [2], as required.

Manufacturer’s sound level data and the site geometry were used as input to a predictive computer model. The software used for this purpose (Cadna-A Version 20256 build: 209.5501) is a computer implementation of ISO Standard 9613-2.2 “Acoustics - Attenuation of Sound During Propagation Outdoors.” The ISO method accounts for reduction in sound level with distance due to

geometrical spreading, air absorption, ground attenuation and acoustical shielding by intervening structures such as barriers.

The closest noise sensitive receptors are 2-storey dwellings located to the southwest of the subject site. Figures 3a and 3b show the resulting sound levels at 4.5 m in height for daytime and nighttime hours. Sound levels in the rear yard are predicted at a height of 1.5 m. The results are contained in Table 4.

Table 4: Predicted Stationary Sound Levels, [dBA], Without Mitigation

Receptor	Address	Criteria (Daytime/Nighttime)	OLA (07:00 to 23:00)	Daytime (07:00 to 23:00)	Nighttime (23:00 to 07:00)	Meets Criteria
R1	2109 Headon Road (2-storey dwelling)	50 / 45	48	44	41	Y
R2	2111 Headon Road (2-storey dwelling)	50 / 45	44	42	39	Y
R3	2113 Headon Road (2-storey dwelling)	50 / 45	42	40	37	Y

Note: A/C units were assumed to operate for 60 minutes during a daytime and 30 minutes during a nighttime hour.

The result of the analysis indicates that the predicted sound levels are below the minimum MECP guideline limits during daytime and nighttime hours at all noise sensitive receptor locations. No further mitigation is required.

5 WARNING CLAUSES

The MECP guidelines recommend that warning clauses be included in the property and tenancy agreements and offers of purchase and sale for all units with anticipated sound level excesses. The following noise warning clause is required for all dwellings.

Suggested wording for future dwelling units in close proximity to institutional buildings is given below.

Type E:

> Purchasers are advised that due to the proximity of the existing institutional building, sound levels from the facilities may be at times be audible.

This sample clause is provided by the MECP as examples and can be modified by the Municipality as required.

6 SUMMARY

Analysis indicates that the predicted sound level will be within MECP guidelines limits at the proposed residential townhouse block. The following recommendations are provided.

1. There are no specific ventilation requirements.

2. Any exterior wall, and double-glazed window construction meeting the minimum requirements of the OBC will provide adequate sound insulation for the proposed dwellings.

3. The use of a warning clause in the property and tenancy agreements is recommended to inform future residents of the proximity to existing institutional uses.

The reader is referred to the previous sections of the report where these recommendations are discussed in more detail.

7 REFERENCES

1. Google Maps Aerial Imagery, Internet application: maps.google.com.

2. Ontario Ministry of the Environment, Conservation and Parks, Publication NPC-300, Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning, August 2013.

3. Ontario Ministry of the Environment, Conservation and Parks, Publication NPC-216, Residential Air Conditioning Devices, October 1993.

4. International Organization for Standardization, Acoustics – Attenuation of Sound during Propagation Outdoors – Part 2: Engineering Method for the Prediction of Sound Pressure Levels Outdoors, ISO-9613-2, Switzerland, 2024.

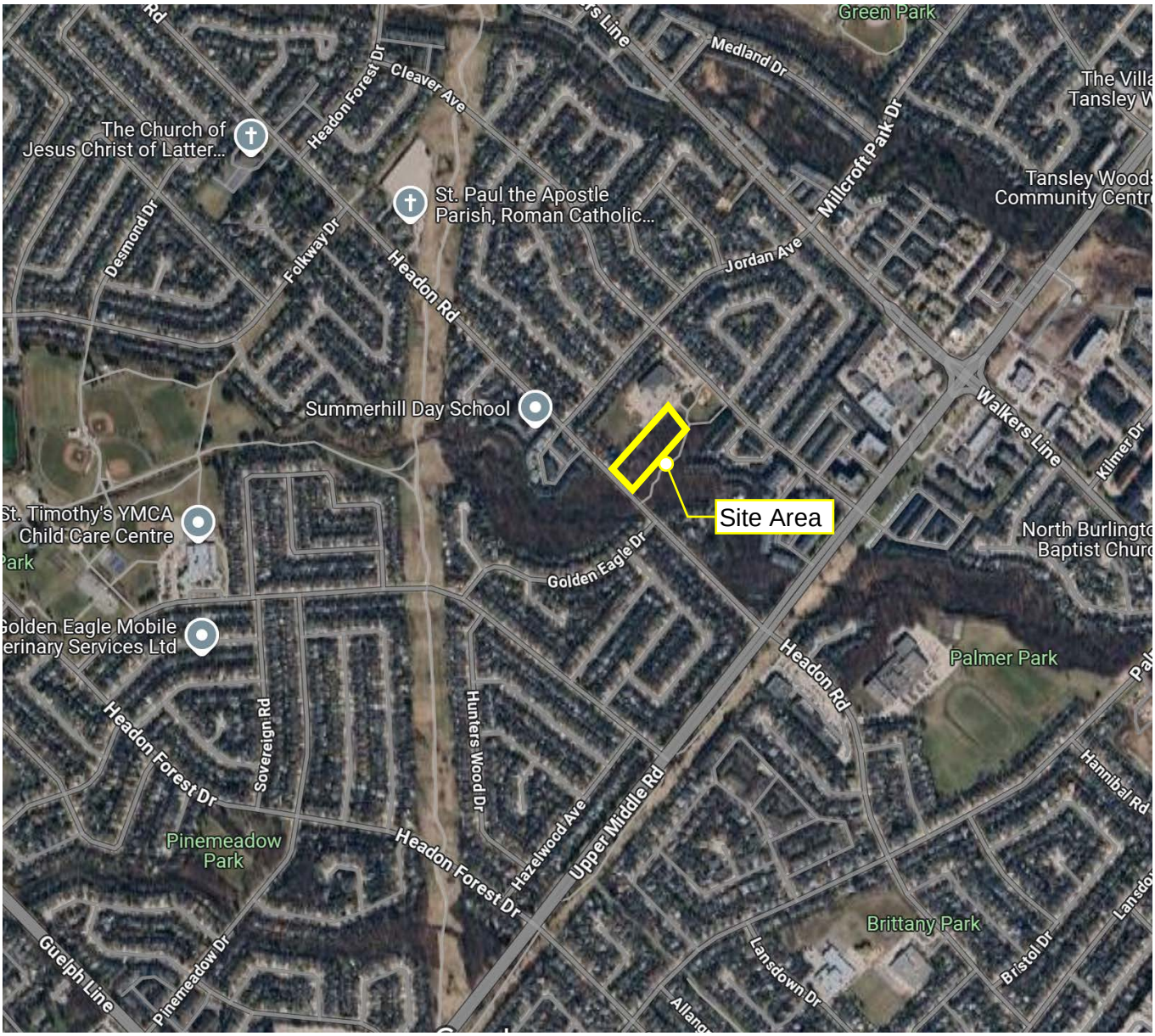
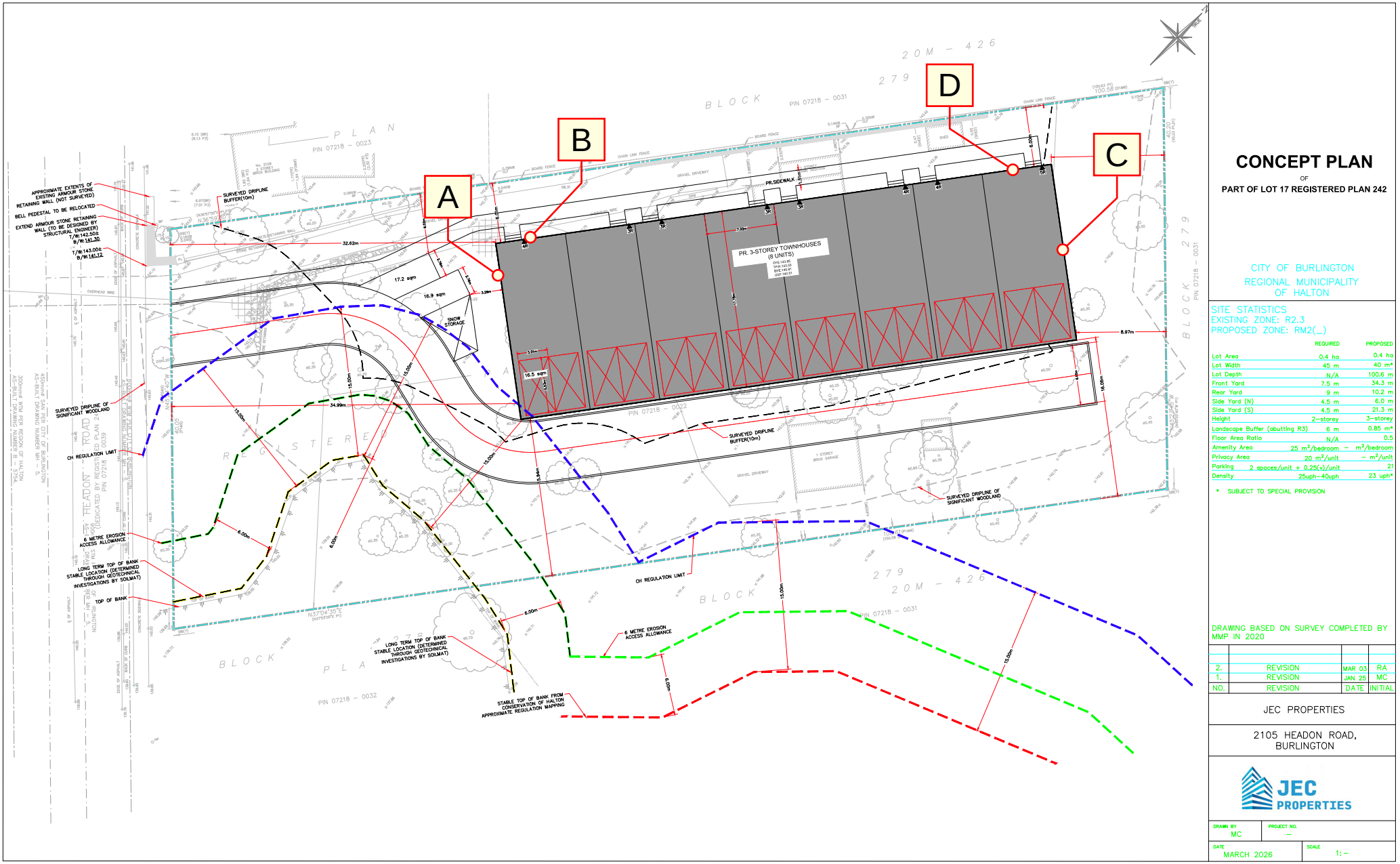


Figure 1: Key Plan



CONCEPT PLAN

OF

PART OF LOT 17 REGISTERED PLAN 242

CITY OF BURLINGTON
REGIONAL MUNICIPALITY
OF HALTON

SITE STATISTICS
EXISTING ZONE: R2.3
PROPOSED ZONE: RM2(_)

	REQUIRED	PROPOSED
Lot Area	0.4 ha	0.4 ha
Lot Width	45 m	40 m*
Lot Depth	N/A	100.6 m
Front Yard	7.5 m	34.3 m
Rear Yard	9 m	10.2 m
Side Yard (N)	4.5 m	6.0 m
Side Yard (S)	4.5 m	21.3 m
Height	2-storey	3-storey
Landscape Buffer (abutting R3)	6 m	0.85 m*
Floor Area Ratio	N/A	0.5
Amenity Area	25 m²/bedroom	– m²/bedroom
Privacy Area	20 m²/unit	– m²/unit
Parking	2 spaces/unit + 0.25(v)/unit	21
Density	25uph–40uph	23 uph*

* SUBJECT TO SPECIAL PROVISION

DRAWING BASED ON SURVEY COMPLETED BY MMP IN 2020

NO.	REVISION	DATE	INITIAL
2.	REVISION	MAR 03	RA
1.	REVISION	JAN 25	MC

JEC PROPERTIES

2105 HEADON ROAD, BURLINGTON

JEC PROPERTIES

DRAWN BY	PROJECT NO.
MC	–
DATE	SCALE
MARCH 2026	1:–

Figure 2: Proposed Concept Plan Showing Prediction Locations

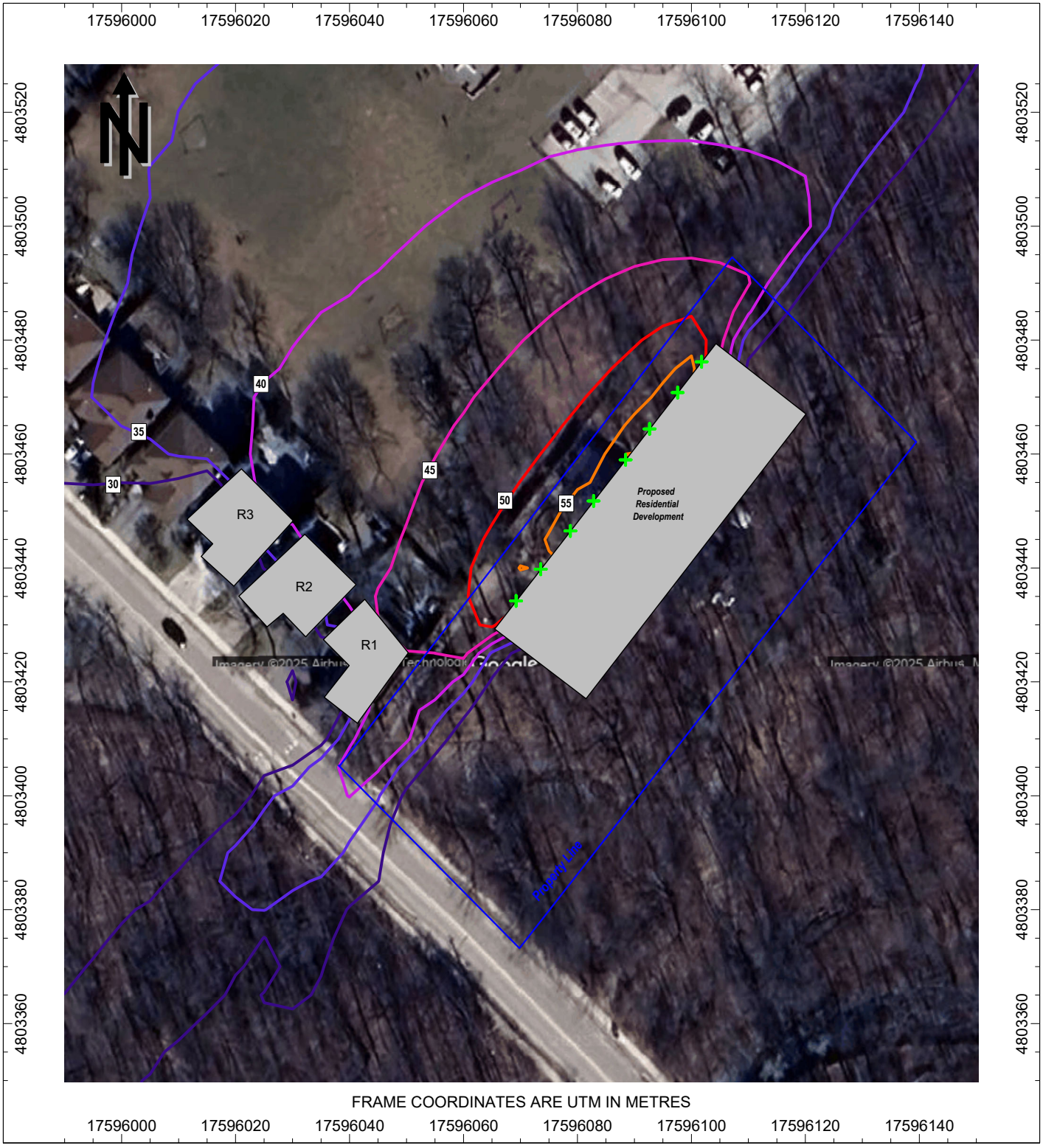


Figure 3a: Daytime Sound Levels from Stationary Noise Sources [dBA]

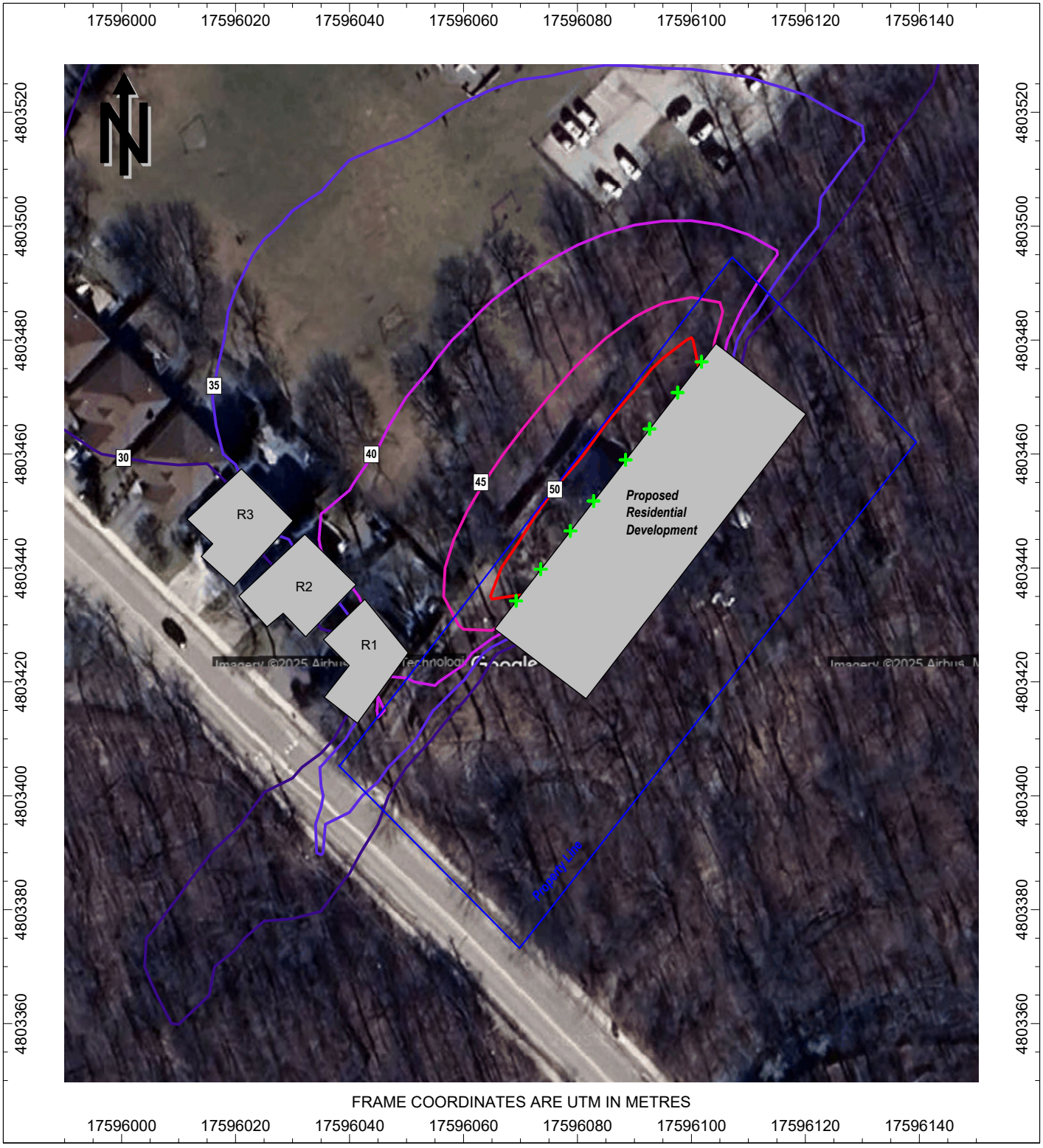


Figure 3b: Nighttime Sound Levels from Stationary Noise Sources [dBA]

Appendix A
Road Traffic Information

AADT 2022

Private Member
City of Burlington

Summary

City of Burlington Annual Average Daily Traffic (AADT) - Year 2022

View Full Details

Download

Details

Dataset
Feature Layer

April 12, 2024 at 12:21:03 PM EDT
Info Updated

April 12, 2024 at 12:21:02 PM EDT
Data Updated

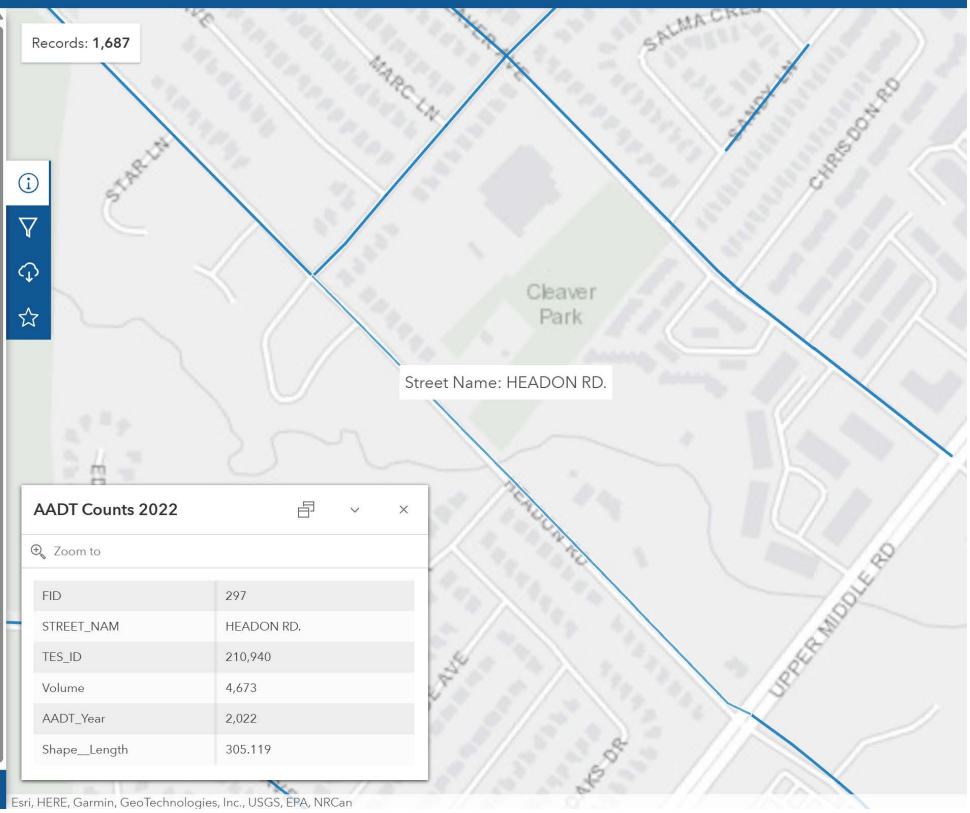
April 12, 2024 at 12:16:07 PM EDT
Published Date

Records: 1,687
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AADT 2022

Private Member
City of Burlington

Summary

City of Burlington Annual Average Daily Traffic (AADT) - Year 2022

View Full Details

Download

Details

Dataset
Feature Layer

April 12, 2024 at 12:21:03 PM EDT
Info Updated

April 12, 2024 at 12:21:02 PM EDT
Data Updated

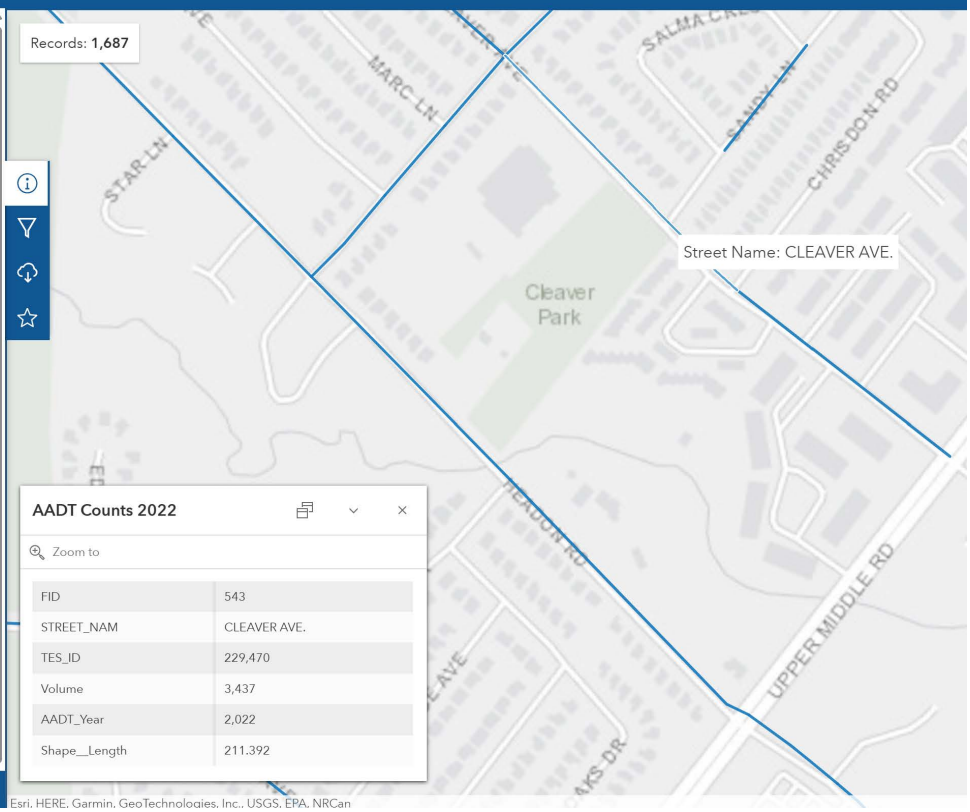
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Appendix B
Sample STAMSON 5.04 Output

```
STAMSON 5.0        NORMAL REPORT        Date: 16-03-2026 17:55:08
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: a.te                 Time Period: Day/Night 16/8 hours
Description: Sound Level at Prediction Location [A]

Road data, segment # 1: Headon Road (day/night)
----------------------------------------------
Car traffic volume  :  5764/640   veh/TimePeriod  *
Medium truck volume :    71/8     veh/TimePeriod  *
Heavy truck volume  :   107/12    veh/TimePeriod  *
Posted speed limit  :    40 km/h
Road gradient       :     0 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):   4673
    Percentage of Annual Growth        :   2.50
    Number of Years of Growth          :  14.00
    Medium Truck % of Total Volume     :   1.20
    Heavy Truck  % of Total Volume     :   1.80
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Headon Road (day/night)
---------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  41.00 / 41.00  m
Receiver height           :   7.50 / 7.50   m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
Results segment # 1: Headon Road (day)
-------------------------------------

Source height = 1.16 m

ROAD (0.00 + 55.00 + 0.00) = 55.00 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  59.37   0.00  -4.37   0.00   0.00   0.00   0.00  55.00
-------------------------------------------------------------------------------

Segment Leq : 55.00 dBA

Total Leq All Segments: 55.00 dBA

Results segment # 1: Headon Road (night)
```

```
---------------------------------------

Source height = 1.16 m

ROAD (0.00 + 48.49 + 0.00) = 48.49 dBA
Angle1 Angle2  Alpha RefLeq  P.Adj  D.Adj  F.Adj  W.Adj  H.Adj  B.Adj SubLeq
-------------------------------------------------------------------------------
   -90     90   0.00  52.86   0.00  -4.37   0.00   0.00   0.00   0.00  48.49
-------------------------------------------------------------------------------

Segment Leq : 48.49 dBA

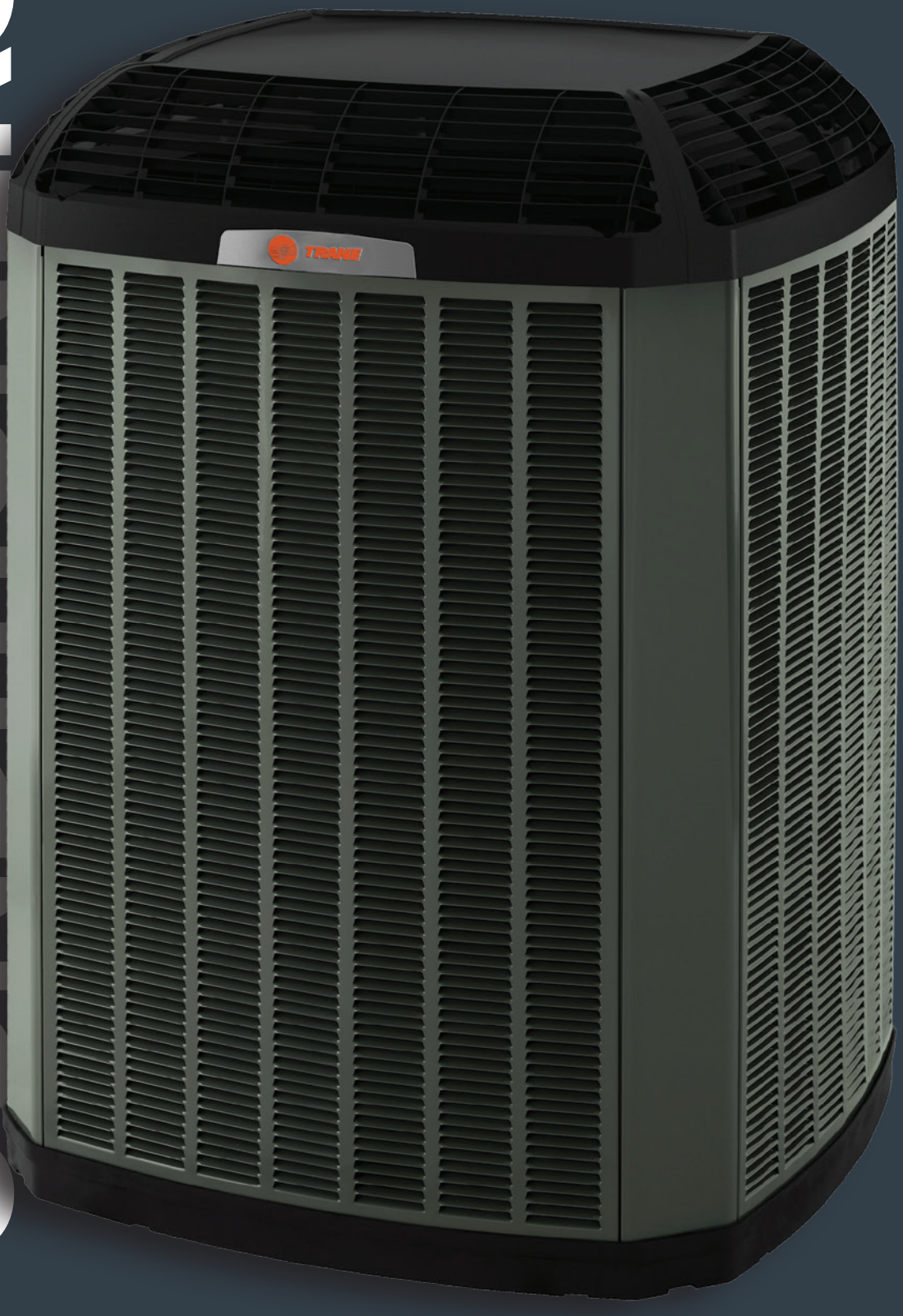
Total Leq All Segments: 48.49 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 55.00
                           (NIGHT): 48.49
```

Appendix C
Supporting Information

TRANE
It's Hard To Stop A Trane.®

AIR CONDITIONERS



Designed for maximum efficiency and Energy Star qualification, Trane® Air Conditioners deliver. In fact, some Trane Air Conditioners are so efficient, they are Energy Star Certified.

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TRANE TECHNOLOGIES™

XV17*



UP TO
17 SEER2

XV18*



UP TO
18 SEER2

XL15i



UP TO
16.0 SEER2

XL17i



UP TO
17.2 SEER2

XR15



UP TO
16.0 SEER2

XR16



UP TO
16.2 SEER2

XR15
SIDE DISCHARGE



UP TO
16.0 SEER2

XR13-14†



UP TO
13.8-14.8 SEER2

XV20i*



VARIABLE SPEED
UP TO 21.5 SEER2

Link™

This product meets ENERGY STAR requirements when appropriate coil components are used. Ask your dealer for details.

MORE STAGES MEAN MORE COMFORT AND EFFICIENCY.

Sometimes you just feel "too hot" or "too cold" between cycles of your system. Having 700 stages nearly eliminates temperature fluctuations. Your system glides along as if on cruise control, barely sipping electricity for much of the day. It also runs at lower speeds for longer periods of time offering:

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- **Lower humidity**
- **Reduced sound**
- **Enhanced filtration**
- **Lowest cost per minute**

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Seasonal Energy Efficiency Ratio (SEER2) is an air conditioner's efficiency rating, similar to the miles per gallon for your car.

Link™ Select models include innovative Trane Link technology, which uses Bluetooth to communicate between system components. Simply opt in through the Trane Home app to have your system's data remotely monitored for even the slightest system changes—letting you relax and enjoy the exceptional comfort your variable speed system provides.

** Trane Link connectivity*

† XR13 and XR14 Air Conditioners do not meet ENERGY STAR requirements



SEET® TESTED

Every Trane system is put through some of the most extreme conditions found in nature in our SEET **[System Extreme Environmental Test]** lab. Put through five years of severe wear and tear in just a few months, our products can stand up to the harshest environments imaginable.

AMERICA'S MOST TRUSTED® HVAC BRAND 10 CONSECUTIVE YEARS[1]

MOST RELIABLE HEATING AND COOLING EQUIPMENT BRAND[2]

[1]Trane received the highest numerical score in the proprietary Lifestory Research 2015-2024 America's Most Trusted® HVAC Brand studies. Study results are based on experiences and perceptions of people surveyed. Your experiences may vary. Visit www.lifestoryresearch.com.

[2]Trane Technologies Marketing Insights. Trane Brand Consumer Survey. June 2021.



A CLOSER LOOK

WeatherGuard™ III Top
Is not only attractive, the durable polycarbonate material provides lasting protection.
Comes with XV20, XL17 & XL15, and is an optional accessory on select models.

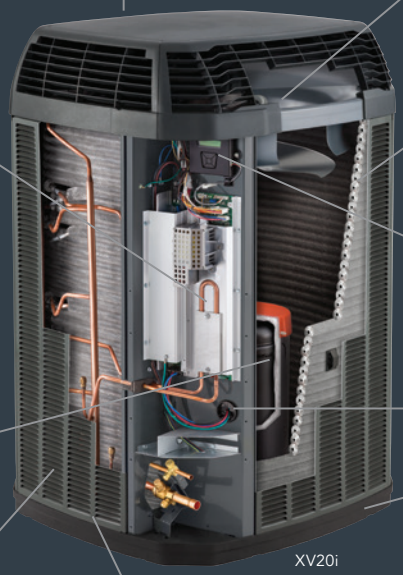
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XV20i

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A unique blade-down design that improves airflow, enhances performance and reduces sound levels.

Exclusive All-Aluminum Spine Fin™ Woven Coil
Enhances airflow and heat transfer while resisting corrosion and leaks. Proven to be far more reliable than traditional copper and aluminum coils.

Trane Link Communicating Control Board
Powers the compressor and controls communication between components to optimize your comfort and efficiency.

Four Wire Connection
Optional 2 wire connection available.

DuraTuff™ Rustproof Basepan won't crack, corrode, rust or warp.



**A Trane UX360 Smart Thermostat and system controller is required for all XV20i, XV18 or XV17 air conditioners.*

WeatherGuard™ Zinc-Coated Fasteners for corrosion resistance and longer life because even minor details are what Trane reliability is all about.

The XV20i shown is for illustration purposes only. Please note that features and components may vary by model. As part of our continuous product improvement, Trane reserves the right to change specifications and design without notice.

FEATURES

	XV20i	XV18	XV17	XL17i	XL15i	XR16	XR15	XR14	XR13	XR15 Side Discharge
Trane Link Connectivity	Link	Link	Link	–	–	–	–	–	–	–
SmartCharge™ †	✓	✓	✓	–	–	–	–	–	–	–
Climatuff® Compressor (stages)	700	700	75	2	1	2	1	1	1	1
Capacity Variability %	30 – 100*	30 – 100*	30 – 100*	70/100	100	70/100	100	100	100	100
Compressor Sound Insulator	✓	✓	✓	–	–	–	–	–	–	–
Overall Sound Power Level [dB(A)]	57 – 75	57 – 75	58 – 75	72 – 74	69 – 74	72 – 74	71 – 74	72 – 73	71 – 75	70 – 73
Spine Fin™ Coil	✓	✓	✓	✓	✓	✓	✓	✓	✓	Plate fin
High SEER2 Efficiency (up to)	21.5	18.0	17.0	17.2	16.0	16.2	16.0	14.8	13.8	16.0
WeatherGuard™ top	✓	Optional	Optional	✓	✓	Optional	Optional	Optional	Optional	–
12 Year limited warranty compressor, 10 Year limited warranty outdoor coil and functional parts with registration. [1]	✓	✓	✓	✓	✓	–	–	–	–	–
10 Year limited warranty compressor, outdoor coil and functional parts with registration. [1]	–	–	–	–	–	✓	✓	✓	✓	✓

† Automatic refrigerant charging allows technicians to focus on other work while the system charges itself

* XV20i, XV18 vary speed in 1/10 of 1% increments; XV17 varies speed in 1% increments.

[1] Registered Limited Warranty terms are available when you register within 60 days of installation. You can register online at Trane.com or by phone at 855-260-2975, otherwise Trane's Base Limited Warranty terms will apply. Base Limited Warranty information on specific products can be found on Trane.com. Ask your dealer for full warranty information at time of purchase. Warranties are for residential and multi-family use only, some exclusions may apply. Product Registration and Registration Transfer exclusions vary in the US from state to state and in Canada from province to province. To determine if there are specific exclusions for your state or province check your local laws.

LUXAIRE
HEATING • AIR CONDITIONING

TECHNICAL GUIDE

LX SERIES
SPLIT SYSTEM
AIR CONDITIONERS
13 SEER – R-410A – 1 PHASE
1.5 TO 5 NOMINAL TONS
MODELS: TC3B18 TO 60





AHRI CERTIFIED
www.ahridirectory.org
Unitary Small AC
AHRI Standard 210/240
Certification applies only when the complete system is listed with AHRI.

C SA US

ISO 9000 REGISTRATION
ISO 9001
Certified Quality
Management System

AMERICAN QUALITY
DESIGNED, ENGINEERED & ASSEMBLED IN THE USA

Due to continuous product improvement, specifications are subject to change without notice.

Visit us on the web at
***www.simplygettingthejobdone.com* and**
www.luxaire.com

Additional rating information can be found at
www.ahridirectory.org

WARRANTY SUMMARY*

Standard 5-year limited parts warranty.

Standard 10-year limited compressor warranty.

Extended 10-year limited parts warranty when product is registered online within 90 days of purchase for replacement or closing for new home construction.

*Does not apply to R-22 models, 3-Phase models, or Internet sales.
See Limited Warranty certificate in the *User's Information Manual* for details.

DESCRIPTION

The TC3B models are part of our successful LX Series split system air conditioner lineup. Optimized for the 13 SEER Regional Minimum Efficiency in the North US and Canada, these outdoor units are specifically designed to be matched with Johnson Controls Ducted Systems indoor coils, furnaces, and air handlers to provide a complete system solution.

FEATURES

- **Small Footprint -** Minimum footprint for easier handling, transportation, and installation.
- **Easier Installation -** Independent panels provide quick access for unit setup. Installation time is reduced by easy power and control wiring access. Options are provided for indoor piston or TXV. The factory installed filter-drier and factory charge for a 15-ft lineset means less time spent brazing and charging the system. The small base dimension and reduced unit clearances make for easier retrofits.
- **Accessible Information -** QR code on the unit provides quick access to technical documents and warranty information.
- **Durable Finish -** The coated steel wire fan guard, coated external fasteners, and pre-treated G90-equivalent galvanized steel chassis components resist corrosion and rust creep. Titanium colored powdercoat paint further protects external panels.
- **Quality Coils -** The high efficiency microchannel aluminum coil is manufactured using an improved material system providing reliable performance and small unit size.
- **Rugged Coil Protection -** Coils are protected from mechanical damage by a proven stamped steel coil guard design.
- **Protected Compressor -** Compressors are protected internally by a high-pressure relief valve and a temperature sensor, and externally by the system high-pressure switch. The liquid line filter-drier is factory installed to protect the compressor against moisture and debris.
- **Reliable Operation -** Ball bearing fan motors provide superior performance in extreme temperatures.
- **Environmentally Friendly -** CFC-free R-410A refrigerant delivers environmentally friendly performance with zero ozone depletion.
- **Top Discharge -** Warm air is blown up, away from the structure and any landscaping, allowing compact location on multi-unit applications.
- **Low Operating Sound Levels -** Developed using CFD and FEA tools, the sturdy cabinet and top design provides sound performance of 77 dBA or lower. Compatible accessories for further sound reduction are also available.
- **Better Service Access -** Diagonal base valves with open access for low-loss fittings, single panel access to the electrical controls, swing out control box for full corner access, and removable fan guard allow easy access for unit maintenance.
- **Agency Listed -** Safety certified by CSA to UL 1995/CSA 22.2. Performance certified to ANSI/AHRI Standard 210/240 in accordance with the Unitary Small Equipment certification program.

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NOMENCLATURE

BRAND	**T**	**T** = Factory Branded
PRODUCT TYPE	**C**	**C** = Air Conditioner (US Northern or Southeast Region)
NOMINAL SERIES EFFICIENCY AND STAGING	**3**	**3** = 13 SEER/1-Stage (US Northern Region)
REFRIGERANT	**B**	**B** = R-410A
NOMINAL UNIT CAPACITY (MBH)	**36**	**18** = 1.5 ton **24** = 2 ton **30** = 2.5 ton **36** = 3 ton **42** = 3.5 ton **48** = 4 ton **60** = 5 ton
VOLTAGE (Voltage-Phase-Hertz)	**2**	**2** = 208/230-1-60
GENERATION (MAJOR REVISION)	**1**	**1** = 1st Gen **2** = 2nd Gen **etc.**
FACTORY OPTION	**S**	**S** = Standard (No Options)
STYLE LETTER (MINOR REVISION) NOT USED FOR ORDERING	**A**	**A** = Style A **B** = Style B

APPLICATIONS AND ACCESSORIES

Refer to the *Price Manual* for specific model numbers.

Standard Application Limits*		
Maximum Lineset Equivalent Length		80 ft
Outdoor Ambient Temperature Limits		
Cooling Operation	Maximum DB	115°F
	Minimum DB	55°F

*For Low Ambient and/or Long Lineset Applications, see the accessories listed below.

Non-Standard Lineset Applications - For installations with reduced diameter or long linesets, refer to the current version of the *Piping Application Guide* P/N 247077, available in the *Application Bulletins* section on www.simplygettingthejobdone.com.

OD Unit Anti Short Cycle Kit (10 Pack) (S1-2TD08700124BK): A time delay that prevents rapid compressor restarting as a result of power interruption, limit switch operation, or thermostat resetting. Not required for HP models, or for AC models with factory electronic controls.

Standard Low Ambient Control Kit (S1-2LA06700424): Allows the use of air conditioning at low outdoor ambient temperatures down to +20°F (-7°C). For use with all R-410A single-stage AC and HP models.

Advanced Low Ambient Control Kit (S1-2LA04701024): Contains the necessary components and controls to allow cooling operation down to -20ºF (-29ºC). For use with some R-410A single-stage AC and HP models. This accessory can only be applied to models that contain a PSC outdoor fan motor.

Low Pressure Switch Kit (S1-2PS06700524): Provides field installed low pressure (loss of charge) protection. Not required for HP models or for AC models with factory electronic controls.

High Ambient Outdoor Fan Motor (S1-FHM**HT):** Class F 70°C motor to allow cooling operation up to 160ºF air entering the outdoor coil. For use with all R-410A single-stage AC and HP models containing R-410A refrigerant only.

Outdoor Communicating Board Kit (S1-33102952310): Electronic control upgrade for standard air conditioning units to provide compatibility with the residential Touch Screen Communicating Control.

Start Assist Kit (S1-2SA067***):** Provides increased compressor starting torque for areas with low supply voltage. Required for units with reciprocating compressors when applied with indoor TXV, and for all units when applied with long linesets or low ambient kits. May be factory installed on select AC and HP units (see the *PHYSICAL AND ELECTRICAL DATA* table). Refer to the Price pages or Source 1 SmartSearch for the correct kit for each application.

Compressor Crankcase Heater Kit (S1-025-***-***):** A wrap-around electrical resistance heater that warms the compressor sump, reducing the chance of liquid slugging on startup. Required on all long lineset and low ambient applications. Refer to the Price pages or Source 1 SmartSearch for the correct part for each application.

Anchor Bracket Kit (S1-1HK0601): Firmly anchors unit to pad or support structure. When properly installed, approved for ground-mounted or roof-mounted applications.

Indoor TXV Kit (S1-1TVM*):** Thermal expansion valves precisely meter refrigerant for optimum performance over a wide range of conditions. See the *SYSTEM CHARGE FOR VARIOUS MATCHED SYSTEMS* table or refer to the Price pages, or Source 1 Smart Search for the TXV part number for each AC and HP model.

Winter Cover Kit (S1-CCVRE*):** Custom fit winter cover protects AC condensing unit from debris during the off-season. Remove before unit operation. Refer to the Price pages or Source 1 SmartSearch for the correct cover for each application.

Cold Weather Charging Tent (S1-CHGTENT01): Provides warm environment to accurately service AC and HP systems in ambient conditions 55ºF (13ºC) or colder.

Touch-up Paint (S1-5130153**):** Color matched aerosol paint for touching up unit chassis and panels. Refer to the Price pages or Source 1 SmartSearch for the correct color for each application.

Compressor Sound Blanket (S1-010-07xxx-000): A field installed dense foam cover that provides 2 dBA sound level reduction. Refer to the Price pages or Source 1 SmartSearch for the correct blanket for each application.

Thermostat: Compatible thermostat controls are available through accessory sourcing. For optimum performance, these outdoor units are fully compatible with our residential Hx™ Touch Screen Thermostats available through Source 1. For more information, refer to the *Thermostats & Controllers* section of the *Offering Catalog*.

SOUND POWER RATINGS

Cooling	Octave Band Sound Power Level (db re. 1-pW)									
Model Number	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**	**dBA**	**SQI**
TC3B1822S	76.4	74.9	67.8	70.2	69.6	66.0	61.6	57.9	74.0	19.1
TC3B2423S	67.2	70.3	65.8	67.8	67.5	63.7	58.8	54.8	74.0	19.1
TC3B3022S	73.9	75.1	66.4	69.4	69.1	63.9	59.6	60.6	74.0	19.0
TC3B3623S	75.7	71.2	68.1	70.2	69.6	64.8	60.1	55.8	75.0	19.0
TC3B4223S	71.8	75.2	68.5	71.9	69.9	64.4	59.8	55.8	75.0	19.1
TC3B4821S	73.0	75.7	70.3	72.0	72.8	65.8	60.8	55.9	76.0	19.1
TC3B6022S	72.1	71.9	69.1	70.7	70.1	66.5	67.3	64.4	76.0	19.0

Rated in accordance with ARI Standard 270.